Patent 52478-3600

IN THE CLAIMS:

- 1. (Original) A light emission apparatus comprising:
 - a substrate that dissipates heat;
 - an insulation film that covers a main surface of the substrate;
 - a metal wiring pattern provided on the insulation film;
- a light emission chip that is mounted above the insulation film, is connected to the metal wiring pattern, and emits light having a peak wavelength in a range of 250 nm to 480 nm inclusive; and
- a light reflective layer that is made of particles of metal oxide and is provided at any place that has the insulation film thereunder, but not light emitting surface of the light emission chip thereunder.
- (Original) The light emission apparatus of Claim 1, wherein
 the particles of metal oxide have an average particle diameter of 0.50μm or
 below.
 - (Previously Presented) The light emission apparatus of Claim 1, wherein the metal oxide is selected from the group consisting of Al₂O₃ and ZnO.
- 4. (Original) The light emission apparatus of Claim 1, wherein the light emission chip is made of either a resonant light emitting diode or a vertical-cavity surface-emitting laser element.

Patent 52478-3600

- (Cancelled)
- 6. (Currently Amended) The light emission apparatus of Claim 1, further comprising a covering member that covers the light emission chip and is made from[[:]] a glass substrate; and a phosphor layer that is provided on a main surface of the glass substrate facing the light emission chip and that is excited by light emitted from the light emission chip thereby emitting excitation light.
 - (Original) The light emission apparatus of Claim 6, wherein
 the light emission chip is made to abut against the phosphor layer.
- 8. (Original) The light emission apparatus of Claim 6, wherein the phosphor layer is made of either: a composition that emits white excitation light by being excited by the light emitted from the light emission chip; or a composition that emits such excitation light that, when synthesized with the light from the light emitting chip, yields white light.
 - 9. (Cancelled)
 - 10. (Previously Presented) The light emission apparatus of Claim 2, wherein the metal oxide is selected from the group consisting of Al₂O₃ and ZnO.
 - 11-13 (Cancelled)
 - (Currently Amended) A light emission apparatus comprising:
 a substrate that dissipates heat;
 an insulation film that covers a main surface of the substrate;
 a metal wiring pattern provided on the insulation film;

Patent 52478-3600

a light emission chip that is mounted above the insulation film, is connected to the metal wiring pattern, and emits light having a peak wavelength in a range of 250 nm to 480 nm inclusive; and

a light reflective layer that is made of particles of metal oxide and is provided at any place that has the insulation film thereunder, but not light emitting surface of the light emission chip thereunder, wherein

a thread hole and a groove are provided with respect to the substrate in a position where the light emission chip is provided in a plan view, the groove being to absorb distortion which occurs when the substrate expands due to heat.

- 15. (Previously Presented) The light emission apparatus of Claim 14, wherein the particles of metal oxide have an average particle diameter of 0.50 μm or below.
 - 16. (Previously Presented) The light emission apparatus of Claim 15, wherein the metal oxide is selected from the group consisting of A1₂0₃ and ZnO.
- 17. (Previously Presented) The light emission apparatus of Claim 14, wherein the light emission chip is made of either a resonant light emitting diode or a vertical-cavity surface-emitting laser element.
 - 18. (Currently Amended) A light emission apparatus comprising:
 a substrate that dissipates heat;
 an insulation film that covers a main surface of the substrate;
 a metal wiring pattern provided on the insulation film;

Patent 52478-3600

a light emission chip that is mounted above the insulation film, is connected to the metal wiring pattern, and emits light having a peak wavelength in a range of 250 nm to 480 nm inclusive;

a light reflective layer that is made of particles of metal oxide and is provided at any place that has the insulation film thereunder, but not light emitting surface of the light emission chip thereunder;

a covering member that covers the light emission chip and is made from[[:]] a glass substrate; and

a phosphor layer that is provided on a main surface of the glass substrate facing the light emission chip and that is excited by light emitted from the light emission chip thereby emitting excitation light, wherein the glass substrate of the covering member is fitted into a metal frame that is fixed to the substrate by means of welding.

- 19. (Previously Presented) The light emission apparatus of Claim 18, wherein the particles of metal oxide have an average particle diameter of 0.50 μm or below.
 - 20. (Previously Presented) The light emission apparatus of Claim 18, wherein the metal oxide is selected from the group consisting of Al₂O₃ and ZnO.